ILLINOIS DEPARTMENT OF PUBLIC HEALTH
A Healthier Today For A Better Tomorrow

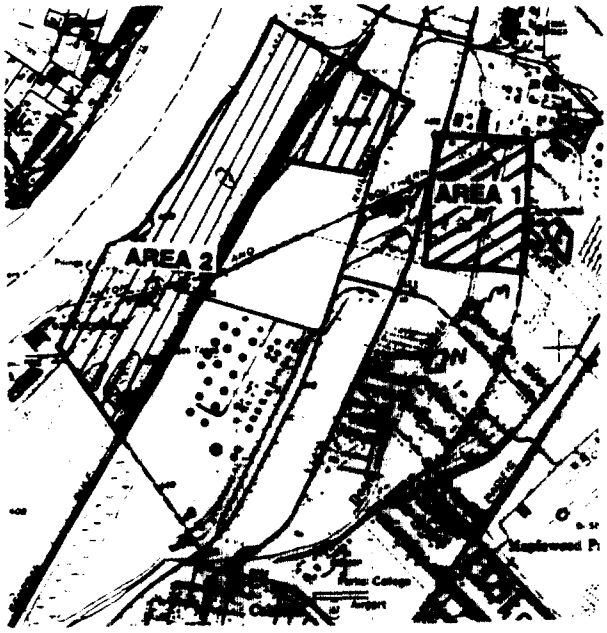
September 1991

Proposed Superfund Site: SAUGET SITES - AREA 1

The Sauget Sites are composed of 18 hazardous waste sites in and around Sauget, Illinois and are being evaluated for inclusion on the National Priority List (Superfund). These sites have been grouped by the Illinois Department of Public Health (IDPH) into Area 1, Area 2, and the Peripheral sites. IDPH, in conjunction with the Agency for Toxic Substances and Disease Registry, is evaluating each proposed Superfund site's potential to harm public health. This pamphlet is a summary of the findings, concerns, and recommendations for Area 1 Sauget Sites.

A site qualifies for the Superfund program when the U.S. Environmental Protection Agency (USEPA) determines that there is a release or threatened release of hazardous substances which may endanger public health, welfare, or the environment.

***** Do not trespass on Superfund sites *****



Sauget, Illinois
* Population within a three-mile radius: 75,248
* Number of sites in Area 1: 6
* Closest residents: Directly adjacent to some sites
* Residential and industrial areas adjacent to the sites

AREA 1 DESCRIPTION AND HISTORY

Area 1 consists of sites G, H, I, L, and Dead Creek Sectors A and B. These sites include subsurface disposal areas (sites G, H, and I), a surface impoundment area (site L), and Dead Creek Sectors A (CS-A) and B (CS-B).

Site G occupies approximately 4.5 acres south of Queeny Avenue and West of Dead Creek Sector B in Sauget. The surface of Site G is littered with demolition debris and metal waste, deteriorating drums, and oily tar-like wastes. Aerial photographs of Site G indicate an excavation in 1950, which was filled in by 1980. The owners and operators during the waste disposal period are unknown. Access to this site is restricted by a fence.

Site H is a subsurface disposal area that covers approximately 5 acres in Sauget. The site is located just south and west of the intersection of Queeny Avenue and Falling Springs Road. The site appears level and vegetated. Aerial photographs indicate Site H was used for waste disposal from approximately 1940 until 1960. The site is owned by James Tolbird of Roger's Cartage Company. Access to the site is unrestricted.

Site I, a former borrow pit that covers approximately 55 acres, is currently owned by Cerro Copper Products. It is located on the eastern one-third of Cerro Copper Products property, just north and east of the intersection of Queeny Avenue and Falling Springs Road in Sauget. The pit was filled in sometime between 1955 and 1962. The Monsanto Chemical Company indicated that drums of organic and inorganic compounds and solvents were disposed of on-site. Monsanto Chemical Company records indicate that at one time sites H and I were contiguous. Access to the site is restricted by a fence.

Site L is a former surface impoundment that was used to dispose of truck rinse water from a hazardous waste hauling business. The site is located approximately 500 feet south of Queeny Avenue and 125 feet east of Dead Creek in Cahokia and is approximately 70 feet by 150 feet. The site is level and covered with black cinders. The pit was dug by Waggoner Trucking Company after the Illinois Environmental Protection Agency (IEPA) ordered the owner, Mr. Waggoner, to stop discharging waste to Dead Creek in 1971. In 1974, Waggoner sold the business to Ruan Trucking. The storage pit was reportedly used by Ruan Trucking for the same purpose: waste water storage. The IEPA estimates that between 1971 and 1978, 164,000 gallons of waste waters were disposed of in the storage pit. Access to the site is unrestricted.

CS-A and CS-B are located in Sauget and Cahokia, respectively. CS-A, located west of Site I on Cerro Copper Products property in Sauget, currently forms two holding ponds that receive and hold surface and roof runoff from Cerro Copper. Although the water in the ponds is discolored and oily, no wastes are currently discharged into CS-A. Presumably, contamination is from past discharges. The CS-A no longer discharges to the lower sections of Dead Creek due to the blocking of a culvert under Queeny Avenue. Site access is restricted by a fence.

CS-B is just south of CS-A between Queeny Avenue and Judith Lane. Part of CS-B is in Sauget and part is in Cahokia. The culverts at both Queeny Avenue and Judith Lane have been blocked to prevent contaminated water from flowing into the lower portion of Dead Creek. CS-B is surrounded by a fence, restricting access to the site.

PUBLIC HEALTH IMPLICATIONS

SOIL

Surface and/or subsurface soil contamination exists at most sites within Area 1. Surface soils were analyzed only at site G and indicate gross contamination with volatile

organic compounds, semi-volatile organic compounds, polychlorinated biphenyls (PCBs), and metals (see table).

Forty of 43 surface soil samples at site G contained PCBs. Six of these contained PCBs at extremely high concentrations. Exposure to contaminants through contact with surface soil at site G is unlikely due to restricted access to the site. However, dust generation and volatilization present possible routes of exposure to surface soil contaminants.

Subsurface soils were sampled at sites G, H, I, and L. Contaminants were discovered at all of these sites (see table) with the highest concentrations at sites G and I. All subsurface contaminants in Area 1 sites were found at a depth of 3 feet or more. PCBs were detected in all Area 1 soil samples with the exception of site L.

Exposure to subsurface contaminants may occur through volatilization to the air or migration into the groundwater.

GROUNDWATER

The same organic contaminants were consistently detected across all Area 1 sites sampled (see table). The organic contaminants found in groundwater at the sites coincide with those found in subsurface soil samples.

Three residential wells on Judith Lane, south of Area 1 sites are contaminated with low-levels of organic compounds. Contaminants detected include toluene, ethylbenzene, carbon disulfide, and styrene. No semi-volatiles, pesticides, or PCBs were detected in the residential wells.

Area groundwater flow is generally south-southwest toward the river. The direction of groundwater flow, however, is influenced by the river level and process wells. Any wells between the river and the sites may potentially become contaminated. Contaminated groundwater may also lead to contaminant release into the river.

Domestic use of contaminated groundwater presents the most significant human exposure pathway. The following are various household activities that would contribute to contaminant exposure:

1) Drinking contaminated water;

2) Bathing or showering: exposed skin may absorb contaminants, and contaminants may vaporize from the water into the air;

3) Cooking: eating food cooked in contaminated water, and contaminants may vaporize from the water into the air while cooking; and

4) Other household activities: washing clothes and dishes, using humidifiers, and watering gardens with contaminated groundwater.

SURFACE WATER

Contaminated leachate and sediments have been observed entering the Mississippi River. Contaminated groundwater may also contribute to river

contamination. Exposure to these contaminants may occur directly during water sport activities and secondarily by the ingestion of contaminated fish and waterfowl.

AIR
On-site air samples have been taken from sites G and CS-B, and indicate site associated contaminants (see table). Phenanthrene was found in all samples taken from these sites. Compounds found in off-site samples were fluoranthene, naphthalene, nitroaniline, pyrene, and PCBs. Residents near Area 1 sites are at risk of exposure to airborne chemicals from Area 1 sites as well as other Sauget sites.

RECOMMENDATIONS

1) Monitoring of all private wells should be initiated or continued.

2) Further environmental characterization and sampling of affected areas on- and off-site are needed to better address environmental and human exposure pathways and determine possible remedial actions.

CHEMICALS OF CONCERN

SAUGET SITES - AREA 1

GROUNDWATER: Chemicals detected at levels of concern. This is not a list of all contaminants in the groundwater. (* chemical has USEPA standard for public water supply, and exceeds the standard.)

VOLATILE ORGANIC COMPOUNDS

carbon disulfide	ethylbenzene	styrene
toluene		

SEMI-VOLATILE COMPOUNDS

4-chloroaniline		

SOIL: Chemicals found in on-site surface and/or subsurface soil samples above levels of concern. This is not a list of all chemicals found in the soil.

VOLATILE ORGANIC COMPOUNDS

benzene	chlorobenzene	2,4-dichlorophenol
ethylbenzene	hexachlorobenzene	4-methyl-2-pentanone
naphthalene	tetrachloroethylene	toluene
1,2,4-trichlorobenzene	xylene	

SEMI-VOLATILE ORGANIC COMPOUNDS

benzo(a)pyrene	1,4-dichlorobenzene	pentachlorophenol
PCBs	pyrene	

INORGANIC COMPOUNDS

antimony	arsenic	barium
cadmium	chromium	cobalt
copper	cyanide	lead
mercury	nickel	silver
vanadium	zinc	

AIR: Chemicals found in on- and off-site air samples above levels of concern. This is not a list of all chemicals found in the air.

VOLATILE ORGANIC COMPOUNDS

naphthalene		

SEMI-VOLATILE ORGANIC COMPOUNDS

fluoranthene	nitroaniline	PCBs
phenanthrene	pyrene	

For more site-related public health information, contact:

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